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Ultra-fast Charging Urban Delivery Vehicles

Allotrope Energy's novel Lithium Carbon battery cell technology combines the benefits of super capacitors with the energy storage capacity of lithium-ion cells. MAHLE Powertrain have utilised Allotrope's technology to design an ultra-fast charging, aggressively downsized battery pack for an urban delivery scooter application. MAHLE Powertrain have also devised the recharging hardware necessary to enable a fleet of scooters to be charged rapidly from a domestic power supply. The target charging rate will allow vehicles to recharge fully in just a few minutes, enabling an opportunistic charging strategy with frequent top-ups, thus eliminating the need for a large battery pack.

The presentation will describe Energy's novel Lithium Carbon battery cell technology. It will also examine the requirements of urban delivery vehicles and define the battery pack specifications. Finally. The resulting battery pack design and high-speed charger concept, for a delivery scooter application, will be presented.